



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- ☐ International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- ☐ International Existing Building Code
- ☐ International Residential Code
- ☐ International Fire Code
- ☐ Uniform Plumbing Code

- ☒ International Mechanical Code
- ☐ International Fuel Gas Code
- ☐ NFPA 54 National Fuel Gas Code
- ☐ NFPA 58 Liquefied Petroleum Gas Code
- ☐ Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized [energy code forms](#)

Section(s): 403.4.4.1 Whole House Ventilation in group R-2 occupancies
(e.g.: Section: R403.2)

Title: Whole House Ventilation in group R-2 occupancies

2. Proponent Name (Specific local government, organization or individual):

Proponent: Michael Lubliner
Title: Senior Building Science Specialist
Date: 3/14/2022

3. Designated Contact Person:

Name: Michael Lubliner
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- 4. Proposed Code Amendment.** Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

Code(s) IMC-WA **Section(s)** 403.4.4.1

Amend section to read as follows: The proposal modifies and existing amendment so as to

403.4.4.1 Whole house ventilation in Group R-2 occupancies. Residential dwelling and sleeping units in Group R-2 occupancies system shall include supply and exhaust fans and be a balanced whole house ventilation system in accordance with Section 403.4.6.3. The system shall include a heat or energy recovery ventilator with a sensible heat recovery effectiveness as prescribed in Section C403.3.6 of the *Washington State Energy Code*. The whole house ventilation system shall operate continuously at the minimum ventilation rate determined in accordance with Section 403.4. The whole house supply fan shall provide ducted outdoor ventilation air to each habitable space within the residential unit.

Add exception: Heat recovery or energy recovery ventilator is not required in low rise (3 story or less), where the ventilation system serves individual dwelling units.

- 5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.
- 6. Specify what criteria this proposal meets.** You may select more than one.
- ☐ The amendment is needed to address a critical life/safety need.
 - ☒ The amendment clarifies the intent or application of the code.
 - ☐ The amendment is needed to address a specific state policy or statute.
 - ☐ The amendment is needed for consistency with state or federal regulations.
 - ☐ The amendment is needed to address a unique character of the state.
 - ☐ The amendment corrects errors and omissions.
- 7. Is there an economic impact:** ☒ Yes ☐ No

This proposal seeks to put more flexible options for H/ERV in the WSEC-R for Low Rise Multi-family LRMF dwelling units and not “back door it in” using the IMC-WA, since the IRC-WA is not an energy code. The economic impact is positive in that it reduces the first costs by not mandating H/ERV in each dwelling unit. Instead it continues to be an option for low rise multi-family dwelling units that are built in compliance with WSEC-R. The proposal continue to allow the builder to decide to specific other approaches to meeting the 4.5 energy credits using higher efficiency envelope enclosures etc. This proposal is NOT intended to apply to WSEC-C. High and mid-rise R2 built under the WSEC-C still require an H/ERV. The proposer who believe that it requiring H/ERV was not intended to apply to low

rise multi-family garden style or heated corridor entry dwelling units where WSEC-R. These building type rarely use a centralized HVAC where ventilation is serving multiple apartments.

The WSEC-R R406 currently allows the H/HRV along with a tighter envelope as a credit option. Clearly there was an oversight in applying 403.4.4.1 to WSEC-R scope LRMF dwelling. Why would there be credit options for the H/ERV if it was mandated. WSEC-R also references the current IMC-WA that the whole house ventilation system be balanced in accordance with section C403.3.6. The proposal does NOT seek to change that balanced requirement. Correctly installed and maintained balanced systems along with unit to unit air leakage reduction (compartmentalization) reduce pollutant from entering a dwelling unit from other dwelling units, hallways etc. The IMC is focused on the health and safety implications NOT energy.

The proposer has provided significant discussion and documentation from WSU Energy Program web site to justify this proposal. Providing the builder an option to use an H/ERV in WSEC-R is the credible way to write code and meet the intent as discussed in the following trainings provided to thousands of WSEC-R over the past 2 years:

Training Resources: <https://www.energy.wsu.edu/EventsTrainings.aspx>

Link to LRMF training resources: https://www.youtube.com/watch?app=desktop&v=1_cxL3txdfs2

Screen shot from training web page:

Multifamily Resources

The following recorded trainings offer guidance about multifamily components of the 2018 WSEC-R.

Video training

- Recording of *Opportunities for R2 Low-Rise Multifamily: Introducing a New ABAA Certification* webinar on December 10, 2021: [watch now](#) (3 hr). Mike Lubliner discussed 2018 WSEC-R compliance requirements and provided insights that apply when designing multifamily new construction, additions and remodels. Laverne Dalglish, Executive Director of the Air Barrier Association of America, and Dan Auer, Project Manager at the King County Housing Authority, discussed a new Air Leakage Control Technician Training Course that will be offered by ABAA in January 2022 for those involved with performing air leakage testing of low-rise R2 MF buildings.
- Recording of *2018 WSEC-R Multifamily Updates* presentation to Housing Development Consortium of Seattle-King County in July 2020: [watch now](#) (1 hr 11 min)
- Recording of *Multifamily Build Tight, Ventilate Right* presentation to Seattle Building Enclosure Council in Oct. 2020: [watch now](#) (1.5 hr)

Please send your completed proposal to: sbcc@des.wa.gov

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.